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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,779	03/31/2000	Hans Eberle	1004-4253	2418

22120 7590 07/03/2003

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EXAMINER	
LEE, TIMOTHY L	

ART UNIT	PAPER NUMBER
2697	4

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/540,779	EBERLE ET AL.	
	Examiner	Art Unit	
	Timothy Lee	2697	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7,10-13,21-25 and 30-39* is/are rejected.

7)☒ Claim(s) *3,8,9,14-20 and 26-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2,3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4-7, 10-12, 21-23, 30-33, and 35-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Turner (US 6,141,329).

3. Regarding claims 1, 22, 33, and 36, Turner discloses a dual-channel real-time communications system. As shown in Fig. 1, the communication system includes a first communication station 12A and a second communication station 12B (a data network comprising...a sending node...a receiving node). See col. 3, lines 23-43. Each of the hosts 14A and 14B are connected to a real-time data port of a real-time channel interface and to a best-efforts data ports of a best-efforts channel interface. This is also shown in Fig. 1. As evidenced by the names of the two transmission channels, data that is delay-sensitive is sent over the real-time connection, and data that doesn't need to be continuous can be sent over the best-efforts channel—these two different transmission channels from two different groups of transmission. See also col. 4, line 29-col. 5, line 7. The "predetermined criteria" can be the delay sensitivity required by the data packets. Also, Turner discloses that the real-time channel can also be a packet-based channel with a certain guaranteed latency, and the best-efforts channel can be a

packet-switched channel, such as an internet connection (node coupled to receive a plurality of information packets from the sending node). See col. 5, lines 8-27.

4. Regarding claims 2 and 23, the real-time channel can act as the low-latency channel, and the best-efforts channel is similar to the high-bandwidth channel. As shown in Fig. 1, the two channels are independent from each other.

5. Regarding claim 4, Turner discloses that the channel setup logic modules each have one or more control lines operatively connected to their respective real-time channel interface and to their respective best-efforts channel interface (first and second transmission channels is coupled to transmit control information relating to network protocol). See col. 3, lines 23-43.

6. Regarding claims 5, 30, and 31, as mentioned previously, depending on the latency requirements of the data, the data will be sent over the real-time or the best-efforts channel accordingly.

7. Regarding claims 6 and 7, Turner discloses that the channel setup module is responsible for control to the real-time or the best-efforts channel. Turner also discloses that the various blocks of the system can be implemented using special purpose hardware, software on a general purpose or special purpose processors or a combination of both. Software of a general purpose would qualify as a system program.

8. Regarding claim 10, it is inherent that there would be at least one switch for each channel, meaning that for two channels, there would be two switches. Initially, after the packets are processed, there must be a switch mechanism to forward the packets correctly the correct channel. The other node must also have a similar ability if this is to be a true duplex system.

9. Regarding claims 11, 32, and 37, it is inherent that there is some sort of buffer available in the sending node if the node is to hold data that will be delayed before being sent over the best-efforts line.

10. Regarding claim 12, the two hosts combine to form a cluster network.

11. Regarding claims 21 and 38, as mentioned previously, data is sent to the first or second channel based on latency requirements.

12. Regarding claim 35, as mentioned previously, the first transmission channel handles real-time, or low latency traffic, and the second transmission channel handles best-efforts, or high-bandwidth traffic.

13. Regarding claim 39, the communications network can be considered a computer program product.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turner in view of Hsieh (US 6,212,194). Turner does not expressly disclose having separate and receive buffers for the first and second transmission channels. Hsieh discloses having send and receive buffers in each of the nodes. See Fig. 1. It would have been obvious to a person of ordinary skill in the art to have a send and receive buffer for each of the channels. One would have been motivated

to do this because this allows data to be stored and held before it is transferred to another location, which could be full and cannot take data at an immediate moment.

16. Claims 24, 25, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner in view of Goheen et al. (US 5,954,799). Turner does not expressly disclose sending control information and data over the same line. Goheen et al. discloses non-channelization, which means that control messages are not sent through a special channel set aside for messaging but share the same channel with other data. See co. 6, lines 2-24. It would have been obvious to a person of ordinary skill in the art at the time of the invention to send control data over the same lines that regular data is sent over. One would have been motivated to do this because this saves on an extra line that could be used for transmissions of other data. The rejection of claim 25 follows similarly to the rejection of claim 2 from previously. .

Allowable Subject Matter

17. Claims 3, 8, 9, 14-20, 26, 27, 28, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rubin et al. (US 6,567,428), Gavrilovich (US 5,771,229), and Hui et al. (US 6,198,749) disclose systems that involve inverse multiplexing or communicating data over more than 1 channel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703)305-4798. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

TLL
June 25, 2003

RICKY NGO
PRIMARY EXAMINER